in the marginal or lateral types where dilatation is complete or nearly so, the bleeding continuing in spite of rupturing membranes, giving pituitrin and the head being too high for forceps.

Bags give good results in cases of marginal or lateral previas where the cervix is dilated at least two to three centimeters, and the bleeding does not stop after rupturing the membranes. It is the method of choice in most cases where the baby is known to be dead or before the period of viability.

We had no mortality chargeable to the bag itself. We have always used a No. 5 Voorhees bag which gives the cervix a dilatation of at least eight centimeters when it comes out. The use of a smaller bag, such as a No. 3, may account for the poor results obtained by others.

The simple procedure of rupturing the membranes may suffice to control bleeding in some cases. The giving of small doses of pituitrin after the membranes have ruptured, is useful if the pains are weak and infrequent. If the patient is going along in labor, and there is little or no bleeding, she should be left alone, but everything gotten ready for transfusion, bags, version, or cesarean in case a sudden hemorrhage should force more active treatment.

In conclusion may I repeat that there is no one or routine method of treatment for placenta previa. Every case has to be individualized, and a decision reached as to the treatment after due consideration of all factors.

490 Post Street.

PSYCHOSES FOLLOWING PROSTATIC SURGERY*

ARNO G. FOLTE, M. D.
San Francisco

INTRODUCTORY.—It is the custom for the Chairman of the Section to prepare an erudite address based primarily on some of his own experiences. The effort, presumably, being a finished product, is not open for discussion. That routine is deviated from in that I have selected a subject that has long intrigued me, but concerning which I know little, and, judging from the paucity of the literature, others are equally ignorant. I have chosen it with the hope of acquiring additional knowledge from those present. There is no set time for the Chairman's address, and since the presentation is short, I would appreciate a free discussion from those who have had experience with the subject. In passing, I might say that all of the other essayists and their discussants will be held strictly to the time schedule.

Those who do surgery involving the posterior urethra of the aged are confronted with two main objectives, preservation of life and restoration of normal urinary function. The pathfinders in urology found the trail beset with may obstacles, but we may well be proud of the fact that we now know how to safely handle most of the pre- and postoperative complications, such as infecting toxemias, hypertension, hemorrhage, etc. In other words, in the bad surgical risks we are forewarned as to the possible morbidity and anticipate the complications. Today it is the so-called "good risks" that cause us our grief, and it is with this group that I am concerned today. A "good risk" is an apparently healthy man, over sixty years of age, whose only complaints are the symptoms of prostatism. Examination shows fair body tone, adequate renal function, a practically normal electrocardiograph tracing and little or no urinary infection. Smooth sailing is expected, but it does not always follow, and I am beginning to question the accuracy of the assigned causes of death.

Four brief case reports will illustrate the subject under discussion.

REPORT OF CASES

CASE 1.—A 64-year-old farmer, active at his work, had the usual symptoms of prostatism for about one year. He had, on examination, a moderately enlarged, nonindurated prostate, and residual urine of six ounces. Phthalein output 48 per cent to 15 per cent; NPN, 30; BP, 140/85. A suprapubic prostatectomy was done. Following surgery he did well except for a mild cardiac upset on the fifth postoperative day, which responded to digitalization. He was sufficiently well to go home on the 15th postoperative day; his suprapubic sinus was closed and he was voiding normally per urethra. However, on the day of discharge he refused all food. His refusal was permanent. He persisted in his refusal to take any medication or nourishment orally until his death 20 days later.

CASE 2.—A 70-year-old male, with a normal, firm, moderately-enlarged prostate, and five ounces of residual urine. Blood chemistry, blood pressure and renal function all satisfactory. He underwent intraurethral prostatic resection and regained good urinary control without residual urine. However, before leaving the hospital he showed evidence of mental upset, and delusions of persecution, and ultimately had to be committed to a State Hospital.

CASE 3.—An active business executive of 69 consulted a well-trained urologist because of symptoms of prostatitis, who cystoscoped the patient in the office. The patient then went home, developed an acute retention that night, which he relieved by self-catheterization. This was followed by a bout of urinary fever, with chills, at which time he came under my care. His blood culture was negative, and he responded to treatment consisting of intravenous fluids, intermittent catheterization, and a short session with sulfathiazole. He soon urinated without difficulty, but had a six-ounce residual. There was a normal blood chemistry, and normal intravenous urographic findings, and so he was classified as a good operative risk. Before any operative work was done he became disoriented, lost all interest in his business, and developed a well-marked amnesia. After 40 days observation he was transferred to a Federal Hospital, where he died two months later.

CASE 4.—A 79-year-old retired druggist, whose only subjective complaint was nocturia. There was a large, benign prostatic hypertrophy, but the residual of urine was less than two ounces, and he was advised against surgery and kept under bimonthly observation. Because a successful suprapubic prostatectomy had been done on

* Chairman's Address. Read before the Section on Urology at the seventy-third annual session of the California Medical Association, Los Angeles, May 7-8, 1944.

one of his friends, he insisted upon a similar operation. His phthalein output was normal and his blood NPN was 30 mg. As a matter of extra precaution, a three-stage prostatectomy was planned. A régimé of sulfonamide therapy with forced fluids was instigated. There was catheter drainage for a few days. Following this, a simple cystotomy was done under low spinal anaesthesia. (The operation took only a few minutes, the space of Retzius was not opened, and the peritoneum was not touched.) Partial anuria and paralytic ileus occurred during the first postoperative week, with slight atelectasis. The anuria responded to hypodermoclysis of normal salt and intravenous glucose, the paralytic ileus to prostigmin and colon flushes, and the atelectasis to carbon dioxide inhalations. However, the patient refused to eat or drink, and kept up a continual hum, or, as he expressed it, "was singing a little song." Wagenstein tube drainage was instigated. On the 11th day evidences of cerebral irritation, tremors, etc. appeared; continuous oxygen was started, but he died on the 13th day, without much difficulty.

DISCUSSION

These four cases of psychosis occurred in elderly men who had evidence of prostatism and who, according to recognized standards, would all be classed as good surgical risks. However, their mental states following preparatory or operative procedures were more disastrous than if they had been prostatectomy deaths. Many others, burdened with poor renal function, infection, hypertension and other complicating conditions make complete recoveries.

Those of us who have practiced urology for several decades well remember the bitterness the annual suprapubic versus perineal prostatectomy low mortality discussions create. It was alleged that most of the deaths followed the first-stage cystotomy, and these were not counted by the suprapubic advocates, while they, in turn, stated that the deaths from "urethral fever" due to the indwelling catheter passing through the posterior urethra should be classified as operative deaths. The literature records a series of many hundreds of successful prostatectomies with no deaths. However, those are only operative statistics. What we are primarily interested in is how best to take care of the next hundred cases of "run of the mill" prostatism that come to our offices.

Rather than a low prostatectomy death rate, the general public is interested in a low prostatism death rate. Hence, the minute a man is examined he should be placed on our mortality list. If his death is due to a psychosis following catheterization for an acute retention, it is still a prostatism death. These psychoses in the elderly male, if they had not been preceded by a surgical episode, would ordinarily be classed as diffuse, senile dementias. Much has been written on the diagnosis and treatment of the senile dementias. The psychiatrists and geriatricians point out that all these changes of character have a gradual insidious development, and many may be arrested by proper treatment before terminal changes occur. The most illuminating statement I could find in the literature was by Hugh H. Young (Practice of Urology, Vol. 1 p. 480): "Psychoses furnish a very perplexing problem in prostatic cases. The mental picture is occasionally very difficult to explain and the etiology impossible to interpret. The psychosis may be due to impaired renal function, chronic infection, and occasionally low grade septicemia. In some instances, however, chronic psychosis with marked disorientation persists, with little or no evident cause", and that is of little help.

I have attempted to study the prepsychotic characteristics, such as easy fatiguability, lack of attention and inability to concentrate, a tendency to repetition, etc., as a guide to future mental breakdown. But these, plus increasing conservatism, decrease in mental elasticity, and persistence in set habits are all so frequently present in cases of prostatism that I have found them of no prognostic import. In several patients with well-advanced prepsychotic changes no change occurred in their mental condition following surgery. A few improve somewhat, due to a lessening of toxic factors and the judicious use of a high vitamin diet. Large doses of testosterone propionate have been advised. However, in view of the fact that such are presumed to promote the formation of cancer, I hesitate to become too ardent an advocate of this therapy.

The United States Government has found it necessary to increase several fold the number of psychiatrists on the induction boards, and now we hear that there is to be another screening of the men before they go into battle. If this type of examination is necessary in handling the "flower of our youth", I am beginning to wonder if a psychiatric examination is not even more important than an electrocardiogram on a man with prostatism who is contemplating undergoing major surgery.

I question that the types of postoperative psychoses occurring in the aged I have presented are true senile dementias. Such are physiological breakdowns usually accompanied with arteriosclerotic brain changes. Here we are dealing with an acute, rather fulminating affair, progressive, and usually terminating fatally in a few weeks. It is not dependent on poor renal function, if phthalein excretion, blood chemistry and intravenous pyelography can be accepted as a correct estimate of renal reserve.

I would suggest that all postmorten examinations on patients who have succumbed following any type of lower urinary tract manipulations include a study of the brain. The only series encountered was that of J. C. Negley (personal communication). The pathologist reported many scattered petechial hemorrhagic areas in the brain substance, and the diagnosis was toxic encephalitis.

This paper concerns only the patient who, according to urological standards, is a good surgical risk, but following any posterior urethral manipulation develops evidence of mental breakdown, and subsequently succumbs. He is logically a surgical prostatism death, but is never, or rarely ever, included in the statistics. What is the pathological cause of the psychosis, how can we identify the cases in advance, and how can the psychosis be prevented?

1063 Flood Building.